

## CLAIMS

1. A heat exchanger device for a gas seal (1) for cen-  
5 trifugal compressors characterized in that it comprises a  
fluid heat exchanger (3) positioned between the gas seal  
of the compressor and the housing wall of said seal (1)  
to keep the temperature of said seal (1) low in the case  
of high temperatures of the wall and/or compressed gas.
- 10 2. The exchanger device according to claim 1, charac-  
terized in that said exchanger (3) is a circular ex-  
changer suitable for enveloping said seal (1).
3. The exchanger device according to any of the previ-  
ous claims, characterized in that said exchanger (3) ex-  
15 tends between said seal (1) and the supporting flange (2)  
of said seal (1).
4. The exchanger device according to any of the previ-  
ous claims, characterized in that said exchanger (3) com-  
prises at least one inlet opening (4) and at least one  
20 outlet opening (6) of the cooling liquid connected to  
each other by a coiled path (8).
5. The exchanger device according to any of the previ-  
ous claims, characterized in that at least one inlet duct  
(7) of the seal gas passes through the centre of the ex-  
25 changer.

6. The exchanger device according to any of the above claims, characterized in that the cooling liquid is water.